

Independent Claims 1, 2 and 13 and Dependent Claims 3-8, 11, 12, 14-16, 19 and 39-41

Claim 1 recites a display device that includes a display and a display controller. The display device also includes a first means that divides one frame period into a subframe periods, sets one of lighting and non-lighting to each of the subframe periods, and expresses n-bits gradation (where n is a natural number of two or more) in accordance with a total lighting time during the one frame period. The display device also includes a second means that does not divide one frame period into subframe periods, that sets one of lighting and non-lighting to the one frame period, that expresses 1-bit gradation in accordance with a total lighting time during the one frame period, and that operates the display with a lower clock frequency and a lower driving voltage than the first means. The display controller controls the first means and the second means. Each of independent claims 2 and 13 recites similar features.

The action relies on Tanabe for disclosing a second means that does not divide the frame period into subframe periods, that sets on of lighting and non-lighting to the one frame period, that expresses 1-bit gradation in accordance with a total lighting time during the one frame period, and that operates the display with a lower clock frequency than the first means, as recited in independent claims 1, 2 and 13. See action of March 23, 2006 at page 5 (citing Figs. 2, 4B, 6, and 8H; and paragraphs [0031, 0040, 0064 and 0065]). Applicant respectfully disagrees that Tanabe, in the cited portions or anywhere else, discloses a second means for operating the display with a lower clock frequency than the first means.

Rather, Tanabe discloses a method of driving a display panel where the number of sub-fields of a display period is changed according to the number of gray scale levels of an image represented by the video signal. See Tanabe at abstract and paragraph [0018]. Tanabe discloses reducing the number of sub-fields when displaying an image having a small number of display gray scale levels. See Tanabe at paragraph [0019 and 0040]. Tanabe provides examples of different driving formats. For example, Fig. 4A of Tanabe shows a driving format used when the gray scale number data indicates 3 or more gray scale levels, whereas Fig. 4B of Tanabe shows a driving format used when the gray scale number data indicates 2 or less gray scale levels. See Tanabe at Figs. 4A and 4B; and paragraphs [0040, 0064 and 0065]. In another example, Tanabe's Figs. at 8A-8H show other examples of driving formats used based on the gray scale levels of an image. See

Tanabe Figs. 8A-8H; and paragraphs [0028, 0079 and 0088]. More particularly, Tanabe's Fig. 8H shows a driving format used when the gray scale levels are within the range from 1 to 2, whereas Tanabe's Fig. 8A shows a driving format used when the gray scale levels are within the range 129 to 256. See Tanabe Figs. 8A-8H; and paragraphs [0079 and 0088]. Tanabe's Figs. 2 and 6 show two possible configurations of the display apparatus in which the display panel is driven based on the disclosed driving methods. See Tanabe Figs. 2 and 6; and paragraphs [0022, 0026, 0031, 0069 and 0070].

Tanabe nowhere indicates that the display panel is driven at different clock frequencies based on the driving format selected. Accordingly, Tanabe does not describe or suggest a second means for operating the display with a lower clock frequency than the first means in the manner recited in independent claims 1, 2 and 13.

Yamada does not remedy Tanabe's failure to disclose a second means for operating the display with a lower clock frequency than the first means. Nor does the action contend that Yamada does so. Rather, the action relies on Yamada for remedying Tanabe's failure to disclose a display having a second means for operating the display with a lower driving voltage than the first means. See action of March 23, 2006 at page 5 (citing Figs. 26-29; and col. 37, line 31 to col. 38, line 46). However, in contrast to independent claims 1, 2 and 13, Yamada discloses a common driver that applies a voltage of a predetermined level for every subframe to control the voltage applied between electrodes of an organic EL element. See Yamada at abstract. More particularly, Yamada discloses a switch S2 that is used to switch drive voltages V1 to V4. See Yamada at col. 37, lines 31-35 and col. 38, lines 3-5 and 35-44.

Accordingly, neither Tanabe, Yamada, nor any proper combination of the references describes or suggests a second means for operating the display with a lower clock frequency and a lower driving voltage than the first means, as recited in independent claims 1, 2 and 13. Applicant therefore submits that the Office action has not properly made a prima facie case of obviousness.

For at least these reasons, applicant respectfully requests reconsideration and withdrawal of the rejection of independent claims 1, 2 and 13 and their respective dependent claims 3-8, 11, 12, 14-16, 19 and 39-41.

Independent Claims 20, 21 and 32 and Dependent Claims 22-27, 30, 31, 33-35, 38 and 42-44

Claim 20 recites, among other elements, a display and a second display mode for operating the display with a lower clock frequency and a lower driving voltage than the first display mode. Each of claims 21 and 32 recites similar features.

As described above with respect to claims 1, 2 and 13, neither Tanabe, Yamada, nor any proper combination of the references describes or suggests a second means for operating the display with a lower clock frequency than the first means. Accordingly, neither Tanabe, Yamada, nor any proper combination of the references describes or suggests a second display mode for operating the display with a lower clock frequency than the first display mode, as recited in claims 20, 21 and 32.

For at least these reasons, applicant respectfully requests reconsideration and withdrawal of the rejection of independent claim 20, 21 and 32 and their respective dependent claims 22-27, 30, 31, 33-35, 38 and 42-44.

Rejection of Claims 9, 10, 17, 18, 28, 29, 36 and 37

Claims 9, 10, 17, 18, 28, 29, 36 and 37, which each depend from one of independent claims 1, 2, 13, 20, 21 and 32, have been rejected as being unpatentable over Tanabe in view of Yamada and Okuda (U.S. Patent No. 6,380,689). Okuda, which is cited in the action for disclosing "a frame period comprising three periods of [a] writing period (address period); a display period (emission period) and an erasing period (reset period)," does not remedy the failure of Tanabe or Yamada to describe or suggest the subject matter of the independent claims. Nor does the action contend that Okuda does so. For at least these reasons, applicant respectfully requests withdrawal of the rejections of claims 9, 10, 17, 18, 28, 29, 36 and 37.

Conclusion

Applicant submits that all claims are in condition for allowance.

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this reply, and the

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amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Pursuant to 37 CFR §1.136, applicant hereby petitions that the period for response to the action dated March 23, 2006, be extended for one month to and including July 23, 2006.

Applicant notes that July 23, 2006 occurred on a Sunday.

The fee in the amount of \$120 for the Petition for Extension of Time fee is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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